

## ABSTRACT OF THE DISCLOSURE

It is an object of the present invention to find out a novel gene marker by which a drug-resistant cancer cell can be detected and provide a means of efficiently and comprehensively detecting a drug-resistant cancer cell using this marker. In the present invention, gene amplifications or deletions have been analyzed in cancer cell strains resistant to drugs, which are anticancer drugs having particularly serious side effects and being administered to cancer patients at a high frequency (namely, camptothecins, cisplatins, etoposides, adriamycins (ADM), and cytosine arabinosides), and parent cancer cell strains. As a result, it was found out that the acquisition of drug-resistance to an anticancer drug in a test cancer cell can be detected by detecting amplification of one or more genes selected from ABC transporter genes and BCL2 family genes consisting of ABCA3 gene, ABCB6 gene, ABCB8 gene, ABCB10 gene, ABCC4 gene, ABCC9 gene, ABCD3 gene, ABCD4 gene, ABCE1 gene, ABCF2 gene, BCL2L2, BCL2L10, BCL2L1, and BCL2A1 which are novel gene markers relating to the acquisition of drug resistance of cancer cells.